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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,079

01/18/2006

Jun Keun Chang

CHANG216

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EXAMINER

KINGAN, TIMOTHY G

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

12/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,079	Applicant(s) CHANG ET AL.	
	Examiner TIMOTHY G. KINGAN	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 2, 4, 5 and 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over J. Qiu, U.S. Patent Application Publication 2004/0145805 (herein after Qiu; effective filing date 01/16/2003) in view of R.L. Brown and G. Schwartz, U.S. Patent 5,371,010 (herein after Brown).

For Claims 1, 2 and 4, Qiu teaches a unitary counting device for cells comprising a top part, connection part and base part, a counting chamber with a grid of microscopic lines to define counting area, the connection layer bonding the top part and the base part (abstract), further comprising two ports **22** for sample application in the top substrate and two ports **24** for air escape ([0016], [0035]; Fig. 1b) (upper substrate comprises a discharge hole), the top part made of a film or sheet of plastic or glass

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[0038] (transparent upper substrate) and the base part (lower substrate) providing optical clarity to permit focus under the field of view of an optical microscope [0048] (transparent lower substrate; area of the fill chamber is transparent). Qiu further teaches that the top part and base part (upper and lower substrates may be bound directly to one another by an adhesive to form an integrated body, the space formed thereby defining the counting chamber of a predetermined height ([0043] and [0042]).

While Qiu teaches that either the top substrate or the base part (upper or lower substrate) may contain precisely spaced lines in a grid pattern, which may be produced in substrate material by hot stamping or embossing [0053] to create positive grids (e.g., Fig. 3(d)), the provisional application discloses formation of such grids only on the top substrate (60/440364, p. 2). However, grids formed by embossing on the lower substrate for counting cells in chambers are known in the art. Brown teaches a container for counting cells and cell colonies in culture comprising a transparent flat bottom, the grid preferably formed on the underside of the container, and in a preferred aspect, the grid is formed from raised transparent ridges that intersect at right angles on the underside of the transparent container (col 4, lines 18-35). It would have been obvious to one of ordinary skill in the art to use the transparent lower substrate, according to the teaching of Brown, in producing raised ridges by embossing in grid formation in the device of Qiu, in order to provide for grid lines in close proximity to cells that may rest on the upper surface of the lower substrate, thereby improving the plane of focus for both cells and grid lines. Further, examiner notes that conventional hemacytometers place grid lines on the transparent lower substrate.

For Claim 5, Qiu teaches that the total thickness of the space (formed by a connecting layer or an adhesive) is chosen to be suitable for different sized cells and can range from 0.01 mm to 5 mm, preferably between 0.02 mm to 1 mm).

For Claim 7, Qiu and Brown do not teach an indicative member on the upper substrate. It would have been obvious to one of ordinary skill in the art to place an indicative member on the upper substrate in order to facilitate coarse positioning of the counting chamber, and the lattice therein, the fine markings of which may otherwise be difficult to locate in a method of counting involving microscopy.

For Claim 8, Qiu teaches that the base part (lower substrate) may be fabricated from any transparent plastic sheet [0049].

For Claim 9, Qiu teaches that biological solutions suitable for use in cell counting microscopic particles include blood or cell culture [0005].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY G. KINGAN whose telephone number is (571)270-3720. The examiner can normally be reached on Monday-Friday, 8:30 A.M. to 5:00 P.M., E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TGK

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797